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Navy & Marine Corps Medical New #02-40 Sept. 20, 2002

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Navy Medicine Awarded Patent For Dengue Vaccine Technology From Bureau of Medicine and Surgery Public Affairs
SILVER SPRING, Md. - Navy medical researchers received receive a patent this week for their new technology that may lead to a breakthrough in developing a vaccine against dengue fever.

Dengue fever, a mosquito-borne infection that in recent years has become a major international public health concern, is found in tropical and sub-tropical regions. Its symptoms include those associated with a severe case of the flu. It is rarely fatal, but has a potentially lethal complication, dengue haemorrhagic fever (DHF), that can lead to high fever, enlargement of the liver, circulatory failure, shock, and death.

The World Health Organization estimates that half a million cases of DHF require hospitalization each year. Without proper treatment, fatalities can reach 20 percent.

"Historically, dengue has had a compromising impact on military operations and for that reason DoD made vaccine development for this agent a top priority," said Capt. Kevin R. Porter, Medical Corps, head of the viral diseases department at Naval Medical Research Center in Silver Spring, Md.

Porter and his research team are taking a novel approach to developing the vaccine called "naked DNA immunization." Navy researchers have been using this approach to develop dengue and other DNA vaccines since the mid-1990s.

Dengue fever, unlike its distant cousin West Nile fever, is caused not by a single virus, but by four types of viruses simply known as dengue-1, dengue-2, dengue-3, and dengue-4. Once in the body the virus

enters cells and releases genetic material that replicates and kills the cells.

"The science of the virus is well understood," said Porter, "but developing an effective vaccine against it is tricky."

The Navy's DNA vaccine is made up of tiny amounts of genetic material from each virus type, which then mimics the virus' behavior in cells but doesn't kill them. Instead, it provides immunity against the disease.

The vaccines against dengue-1 and dengue-2 have been successfully tested in the laboratory and the Food and Drug Administration has approved phase one clinical trials on the dengue-1 vaccine. The trials are expected to begin early next year.

The vaccine patent is shared by five NMRC researchers: Porter; Lt. Cmdr. Tadeusz Kochel, Medical Service Corps; Dr. Kanakatte Raviprakash, Ph.D.; Dr. Curtis G. Hayes, Ph.D.; and retired Navy Capt. Stephen L. Hoffman, Medical Corps.

Dengue was a major incapacitating illness among American troops in the Philippines, Asia and the Western Pacific during World War II. It continued to incapacitate troops in Vietnam, in Somalia during Operation Restore Hope, and in Haiti during Operation Uphold Democracy.

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Yokosuka Hosts First Overseas Joint Trauma Seminar By Bill Doughty, U. S. Naval Hospital Yokosuka

YOKOSUKA, Japan - You'd be hard-pressed to find an orthopedic specialist, eye surgeon, or vascular trauma expert on any modern battlefield, but these services are key to saving lives when wartime casualties occur.

So, the military provides specialists nearby - trained with these skills - to take care of casualties as quickly as possible.

On Sept. 17-19 the Navy held its first overseas Joint Trauma Seminar for surgeons forward-deployed in Japan. The conference was co-sponsored by Commander, U. S. Seventh Fleet and the Japan Self Defense Force (JSDF) and hosted by U. S. Naval Hospital, Yokosuka, Japan.

JSDF Fleet Surgeon Capt. Gentaro Tsumatori arranged for surgeons from throughout the host nation of Japan to attend.

"It's one of my dreams for the past one year," said Tsumatori. "We Japanese and maybe even the U. S. Navy need to continue to improve our skills in dealing with trauma."

Capt. Lawrence Roberts, Medical Corps, the Navy's Trauma Specialty Leader, came to Yokosuka from Navy Medical Center San Diego with Lt. Cmdr. Mathias Kill, Medical Corps, to lead the program for several dozen Japanese and American military surgeons and other specialists.

Topics included battle injury patterns; damage control surgery; vascular trauma; chemical/biological;

ultrasound laboratory; head and spinal injury; ophthalmologic injury and battlefield anesthesiology; solid organ injury; and pelvic trauma among others.

According to Roberts, the training seminar - with its focus on military trauma life support scenarios, laboratory experience, and a mass casualty drill - is especially beneficial overseas.

"If we send our troops into places where we do not necessarily have robust medical and surgical capabilities, we may have to depend on local assets for initial care of our patients - our soldiers, airmen, and Marines," he said. "So, teaching these host nations about our standards and the way we approach trauma and casualty care can only benefit us in the long run."

Tsumatori spoke on behalf of all the visiting Japanese surgeons. "It's very important for us to improve our skills, so this is a remarkable chance for us."

Llewellyn concludes, "I want to reiterate what Captain Tsumatori said to all of us in his opening remarks: Medicine knows no boundaries. We speak a common language, a universal language. People are people. It's our job to be there for them."

Thanks to Navy Medicine's Trauma Seminar, trained specialists will be nearby, ready, and "steaming to assist."

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Navy Medicine Researcher Helps SAR Swimmers Get, Stay Fit

By Doris Ryan, Bureau of Medicine and Surgery
PENSACOLA, Fla. - Navy Sea Air Rescue (SAR)
swimmers arguably have one of the most physically
demanding jobs in the world. They must have the
strength of a body builder and the swimming ability of a
competitive Olympian. They must be able to pluck
drowning victims from storm-tossed oceans or raging
rivers, or strong-arm prone victims down a mountainside.
Their strength and physical skills may make the
difference between life and death.

One person who knows better than anyone the physical demands of being a SAR swimmer is Lt. Cmdr Mike Prevost, Medical Service Corps. Prevost is an exercise physiologist at the Naval Aerospace Medical Research Laboratory in Pensacola. He and his research team have been studying just what skills and strengths SAR swimmers must have to perform rescues.

The result of his research is a new physical fitness program that will be officially implemented into the SAR community in April 2003.

"Our goal wasn't to build a general physical fitness program for all Sailors and Marines," said Prevost. "Our goal was to design a fitness program that makes a great rescue swimmer."

The fitness program was first tested at the Naval Aircrew Candidate School (NACCS) early this year by students moving on to the Aviation Rescue Swimmer School

(ARSS).

medical care.

"We introduced the new PT program at NACCS in March and in just four months we noticed a 35 percent increase in the number of students qualifying on the fitness intest for ARSS," said ARSS's Senior Chief Petty Officer Ken Thompson.

He said that it takes nearly a year to train a SAR swimmer. Once in the fleet, more than 90 percent remain swimmers until they leave the Navy, which means staying rescue-fit is a career-long endeavor. Prevost's program provides the most efficient fitness program to test swimmers, and keep them fit throughout their career.

"This is the most rewarding project I have done at NAMRL because it will impact the way the fleet does business," said Prevost. "It's been a really rewarding experience from beginning to end."

There are about 1,800 SAR swimmers in the Navy.

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Training Keeps Fleet Surgeons a Cut Above
By Chief Journalist (SW/AW) Roger L. Dutcher, USS Essex
ABOARD USS ESSEX AT SEA - USS Essex (LHD 2)
welcomed aboard the 31st Marine Expeditionary Unit (MEU)
recently to participate in the Amphibious Ready Group
(ARG) and Special Operations Capable (SOC) Exercises,
which prepares the MEU for their SOC certification. The
additional Marines effectively doubles the ship's
population and dramatically increases the demand for

To meet this new demand, the Essex medical department relies on Fleet Surgical Team Seven (FST-7) to augment its capabilities.

FST-7 is comprised of seven officers and nine hospital corpsmen assigned to U. S. Naval Hospital Okinawa at Camp Lester when they are not deployed.

Lt. Carl Goforth, Nurse Corps, has only been with FST-7 for about three months, but is not new to the amphibious Navy.

"I was in the Marine Corps 12 years ago," he said. "I was on both USS New Orleans and USS Tarawa."

Though his deployment on Essex is not his first ship assignment, it is his first assignment as a critical care nurse. He said his experience gives him insight into what the Green (Marine) side is doing during the exercises and gives him a better understanding of the two very distinct sides of the Blue/Green team.

FST-7 participated in a mass casualty drill on Sept. 14, as part of Blue-Green Workups, leading up to ARG Exercise.

"The drill went well," Goforth said. "We have a lot of new people on the ship, so it's important to run these drills routinely to make sure everybody knows what the battle plan is."

Cmdr. Nancy Curll, Nurse Corps, who has been an anesthetist with FST-7 for more than two years, has participated in exercises throughout the Pacific with

the Essex ARG and 31st MEU.

"When the Fleet Surgical Team embarks, the OR [operating room] staff's goal is to get the rooms up and running so we can do surgery," Curll said. "Even though we're just off the coast of Okinawa, we already did minor surgery yesterday."

Though the members of the surgical team work independently within their individual specialties while supplementing the Okinawa hospital staff ashore, they maintain their team identity through a weekly Fleet Surgical Team Day when they meet to go over administrative matters and prepare for deployment. "We are essentially at the hospital to keep our skills up," Curll said. "If I'm not doing anesthesia or patient care, I get rusty."

Two of the FST-7 corpsmen recently completed a six-

Two of the FST-7 corpsmen recently completed a six-week Emergency Medical Technician training prior to embarking on Essex, and most of the surgical team will be going to Los Angeles later this year for four weeks, working 12-hour shifts for six nights a week, taking care of trauma cases that are brought into the emergency room.

"We do take advantage of the training offered at the hospital in Okinawa, as long as it doesn't interfere with our deployment schedule," Curll said. "The training opportunities ashore are few indeed, considering the frequency of deployments." FST-7 is different from surgical teams in the United States, Curll said, because of the nature of the ship's schedule itself.

"Stateside FSTs don't deploy as often as we do, and they switch between ships," she said. "We're fortunate to be on the same ship all the time."

She said the shorter but more frequent deployments of forward deployed ships make the FST schedule more challenging but they actually provide better training opportunities because there is relatively less down time in between training cycles.

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Pearl Harbor "Steaming To Assist" By Ens. A. A. Noad, Medical Service Corps, Naval Medical Clinic Pearl Harbor, Hawaii

PEARL HARBOR, Hawaii - From the Sept 11 terrorist attacks came a new term: Homeland Security. Since then, initiatives call for increased protection and preparedness in the unfortunate event of future terrorist attacks on national security.

For Oahu-based commands, that means increased coordination between local police, fire, health and civil defense authorities. At Naval Medical Clinic Pearl Harbor (NMCLPH), disaster preparedness has always been part of its mission; but the events of Sept. 11 brought a heightened awareness.

The clinic staff has been "turning and burning" since last Sept. 11, implementing enhanced Chemical, Biological, Radiological and Environmental (CBRE)

training for all hands. Navy Environmental and Preventive Medicine Unit No. 6 provided a three-day course for clinic providers on the medical management of CBRE casualites, and a one-day CBRE awareness course for non-provider clinic personnel.

The clinic has also conducted field medical skills training, providing advanced medical proficiencies that would be essential in the event of a mass casualty. Training topics included field medical skills in the area of tracheotomy, ocular injury, abdominal wounds and many others.

These skills were put to the test when 200 command members, Federal Fire Department personnel, and paramedics took part in an unannounced mass casualty drill, providing "real life" experience that classroom training couldn't provide.

Last November, the clinic was also assigned the duty as a mobilization platform. Seventy-four command members assigned to the platform will serve with forward deployed Sailors and Marines providing front line medical care when called upon. The team has received specialized field medical triage training, and now has the supplies and equipment necessary for disaster preparedness.

Building upon the lessons of the past and maximizing command resources, the Pearl Harbor clinic is "steaming to assist" in the event of any future man-made or natural disaster threatening the Pearl Harbor area. They stand-by the CNO's motto "Mission First: People Always!"

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Renovations Underway at Pensacola's 'Q By JO2 Scott New, Naval Hospital Pensacola

PENSACOLA, Fla. - Naval Hospital Pensacola's Burns Hall, the bachelor enlisted housing for Sailors assigned to the hospital, is getting a much-needed quality of life face lift.

"There hasn't been an upgrade or renovation to the barracks in years and that was a major concern to us," said Chief Mess Management Specialist (Surface Warfare) Ronald Brooks, general services division officer for the "Q." "Our No. 1 objective in renovating the facilities is an improved quality of life" for the Sailors of the Pensacola medical facility."

With the financial support of the Bureau of Medicine and Surgery, Brooks didn't hesitate to jump start the project.

"We began with the lounge areas," said Brooks.

"They're the more common areas that our shipmates
gather. We wanted to upgrade and make it more
comfortable."

From new couches and chairs to coffee tables and rugs, the newly renovated lounges are providing junior Sailors a place to socialize or just relax after a hard day's work.

"(It) definitely makes it feel more like home,"

said Hospitalman Ryan Hutchinson. He's lived in the barracks for the last 16 months and is enjoying the renovations, even if it means lending a hand to working parties.

Many of the junior enlisted Sailors residing at Burns Hall come to the Naval Hospital straight from boot camp or Corpsman "A" school.

"We want them to feel good about where they live," says Chief Brooks. When that happens, "they begin to take pride in their barracks."

Soon, each room will sport a fresh coat of paint and new carpeting, and the laundry room will feature a new tile floor.

The sweat-equity provided by the barracks residents is paying off - NH Pensacola has been recommended for the Admiral Elmo R. Zumwalt Award for bachelor housing operations that provide services equivalent to, or better than, facilities and services found at the finest resident halls or mid-grade commercial hotels.

"It really comes down to keeping our Sailors happy - always improving their quality of life," said Brooks.

Burns Hall will also feature a new state of the art security system, according to John Hinkley, the building's manager.

With all the renovations taking place, Brooks still has big plans for the future, including hopes for a new wing.

For now, getting the renovations done on time is the main concern. $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left$

"We want to have the majority of the work completed before the holidays - around the first week of December," says resident Legalman First Class Yolanda Adams. "I know we're on our way."

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Whidbey's Oak Leaf Club Raises Comfort Factor at Medical Facilities

By Sara E. McGruder, Naval Hospital Oak Harbor, Wash.

OAK HARBOR, Wash. - The sick and the injured know
Navy Medicine is ready to help. But many of little
items that make a stay at the hospital more comfortable
just aren't in the Navy supply system. The Charities

Committee of the Oak Leaf Club is helping to fill that gap at Naval Hospital Oak Harbor.

The Oak Leaf Club, made up of spouses of Medical, Dental, Nurse and Medical Service Corps officers, raised funds over the past year to purchase and donate a variety of items for the hospital. The most recent donations are floor lamps and plants, which now brighten and beautify the labor and delivery rooms.

"The club donations over the years have and are supporting our mission to provide patient care with a personal touch," said Ms. Ulrike Lucas, labor and delivery supervisor.

"The (hospital) is thankful for the numerous contributions the club has provided," said Oak Harbor's Commanding Officer CAPT Don Jensen, Medical Corps. "The

Oak Leaf Club works very hard and they have a very sincere interest in their military treatment facility."

In the past, the club has donated microwave ovens, televisions and play items to help provide a better stay for patients of all ages. Other items have been donated to the dental clinic and Aviation Survival Training Center (ASTC).

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First Person: Dentalman Audel Herrera, Naval Dental Center Great Lakes, Ill.

I love all kinds of music because it makes me feel happy, but when it comes to rap I get all hyped-up. I write my own music. It really makes me feel good when I rap. I try to convey positive messages in my music and I want people to have a good time listening to me.

I was always the class clown in school. That's when I started rapping, just out of a joke. I love poetry and found it was a good way to express my feelings. It was just a hobby at first, but it grew to be a more serious thing. I'll never forget the day I saw my old next-door neighbor at a carwash in our hometown in Baytown, Texas, and we started talking about rap music. I did a little freestyle rap performance right there at the car wash. Little did I know that from the carwash I would end up recording for a music studio, where I was featured in my first CD in the spring of 2001. I also did some additional recordings that spring.

Then some clubs in Texas called me and wanted me to do some freestyle. More clubs have started asking. There started to be a demand for me.

I'd really like to go with a name label company like Sony, Universal, or Colombia Records. Who knows, I might become famous!

My little brother is a big fan of mine. He loves listening to me. My little sister likes to sing, so maybe one day I'll feature her in one of my CDs. I would love for all of my nieces and nephews to rap with me.

This kind of music also allows me to show people what the Hispanic language and culture is really about. Some of my rap songs are in Spanglish, a mixture of Spanish and English words. You have to be motivated to do this type of music. I'm a very energetic people person who loves music and kids. I love kids so much that if I had my way, I'd have a whole football team and cheerleading squad of kids and maybe even have them rapping with me!

- Interviewed by Aveline V. Allen, Bureau of Medicine and Surgery $\,$

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TRICARE Awards New Mail Order Pharmacy Contract
From TRICARE Management Activity Public Affairs
FALLS CHURCH, Va. - The Department of Defense's
TRICARE Management Activity (TMA) awarded Express

Scripts, Inc. of Maryland Heights, Mo., a contract to provide mail order pharmacy services for the TRICARE Program. The contract is valued at approximately \$275 million over a five year period.

"DoD learned from the past five-year contract about the benefits and services that are important to beneficiaries," said Dr. William Winkenwerder, assistant secretary of defense for health affairs. "We have worked to improve benefits and have designed the next generation of TRICARE contracts, including the mail order pharmacy contract, to build on constantly increasing levels of excellence in performance and value. It is our goal, as well as our commitment to our beneficiaries, to ensure they have the best health care available, and we believe this contract will help us meet this goal."

The new TRICARE Mail Order Pharmacy (TMOP) contract will replace the existing National Mail Order Pharmacy (NMOP) contract, which is due to expire at the end of February 2003. The TMOP contract will provide a worldwide, full-service mail order pharmacy program to all TRICARE-eligible beneficiaries and will begin on or about March 1, 2003.

Like the NMOP, the TMOP provides another option for TRICARE beneficiaries to meet their prescription needs in addition to military and retail pharmacies. All three options for pharmacy services will be monitored by the Pharmacy Data Transaction Service (PDTS), a patient medication record that enhances patient safety.

"The military health system continues to be a leader in quality, convenience and safety in providing pharmacy services," said Army Col. Bill Davies, director, DoD pharmacy programs.

More information about the new TMOP program will be available soon on the TRICARE Web site at www.tricare.osd.mil. Beneficiaries currently using NMOP will receive information about TMOP prior to its start date.

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HealthWatch: Head Lice: Not Just a "Nit-Pick"-ing Problem By CDR Scott Clements, Medical Corps, Naval Hospital Pensacola

A grandmother recently told me about her trip to the hair salon with her two granddaughters. Instead of receiving haircuts, they were escorted to the door. Both young ladies had heads teeming with head lice.

Head lice infestation is a common problem, especially for young school age children. There are an estimated 6 to 12 million cases in the United States annually.

September is Head Lice Prevention Month and back to school time, so it's a good time to discuss the problems head lice pose.

Children usually catch lice by contact with other infested children during normal play and social interactions such as slumber parties, playground

activities, sports events, and sharing of personal items.

Head lice do not respect socioeconomic status and infestation is not a sign of poor hygiene. Lice infestations are a nuisance, but not a health hazard. There are no diseases spread by head lice.

The louse lives by feeding on blood obtained from the human host. When separated from the scalp, adult lice die with a few hours.

Lice may live off a human for about two hours, so transfer of live lice from inanimate objects is a less important form of transmission. Contrary to popular belief, lice do not fly or jump from person to person and pets don't carry lice.

How does a parent tell if their child has head lice? If the child is scratching their head often, that's a good indicator, as itching is the most common symptom.

Diagnosis of lice depends on noting live lice on the head. The adult louse prefers to congregate in the hair at the nape of the neck and behind the ears. Lice lay their eggs, called nits, at the base of the hair shaft so finding eggs less than a quarter-inch from the scalp also indicates an infestation.

Lice are usually treated with the application of lice-killing shampoo or lotion on the hair and scalp. The most commonly used shampoos or lotions contain permethrins or pyrethrins, which kill adult lice and nits.

Once treatment begins, follow up applications are often recommended after seven to ten days. Health care providers may recommend prescription shampoo for more severe cases.

Killing any potential sources of re-infestation is also recommended. Machine-washing of bed linens will kill both lice and nits. Stuffed animals, pillows and other non-washable items may be stored in a plastic bag for 10-14 days. The live lice die quickly and as nits hatch they also die without a human to feed on. Use of insecticide spray is not recommended.

Some schools have a "no-nit" policy in an attempt to control the spread of lice. Others may allow children with lice to attend classes, but these children usually undergo regular follow-up exams to exclude the presence of live lice.

Help teach your child how to avoid head lice infestation. It may be one of the best things you can do for them this school year.

- Clements, is a board-certified pediatrician practicing at Naval Hospital Pensacola, Fla.